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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,282	01/29/2001	Peter J. Allen	KCX-290 (15083)	9284

7590

07/29/2005

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EXAMINER
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HUG, ERIC J

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,282

Applicant(s)

ALLEN ET AL.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

In view of the Appeal Brief filed on June 13, 2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Applicant's arguments, see Appeal Brief, filed June 13, 2005, with respect to the rejections set forth previously have been fully considered and are persuasive.

The rejection of claims 1-27 under 35 U.S.C. 112, first paragraph has been withdrawn.

The rejections of claims 1-27 under 35 U.S.C. 103(a) as obvious over Parker (US 5,745,365) in view of any one or more of Houston et al, Rule Jr., Bialkowski, Sherlock, or Admitted Prior Art, have been withdrawn. It is recognized that Parker teaches taking web measurements wherein raw data is in the form of electrical signals rather than in the form of visual images of the web. It is also recognized that in Parker the measurements are not made on a wet web upon a forming fabric, but rather on a web near the dryer section.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ischdonat (US 6,743,337), Callender et al (US 6,053,040), and Shields et al (US 5,899,959), and, if necessary, in view of Bernie' et al (US 6,301,373) and Yakabe (US 5,393,378).

Ischdonat, Callender, and Bernie' qualify as prior art under 35 U.S.C. 102(e).

Ischdonat discloses a method of measuring web properties wherein multiple areas of the material web are simultaneously measured. Information is generated by imaging the multiple measuring points on the surface of the web. Reflected or transmitted light can be used in forming the images. For each measuring point, a partial area of the material web is imaged. The multiple images are subsequently combined into an overall image of the web. Therefore, a snapshot of the material web is obtained. The results are used for control and/or adjustment of process parameters immediately after the measurement. Any property by which the interaction of electromagnetic radiation with the material web is influenced can be measured, including fiber orientation and distribution (column 2, lines 28-37). Measurements can be determined at any chosen position of the paper machine. This clearly encompasses the measurement of formation (fiber orientation and distribution), and suggests that formation can be measured in the forming section of a paper machine.

Callender discloses a system of imaging and determining the properties of a web on a forming wire using reflected light. The system comprises one or more cameras and a computer

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having a capture board for analyzing the images obtained by the camera. The system is for detecting and controlling a physical characteristic of a moving web such as moisture or variations in web characteristics which may be visually discerned. Imaging can be performed using a line camera or a scanning camera that traverses the forming wire.

Shields discloses a method and apparatus for on-line measurement of visual characteristics of a moving web of paper, including the formation of a forming web on a paper machine wire, and uses on-line analysis of the resulting data to control the measured web properties. Visual characteristics of a high speed web of paper are imaged using a high speed video camera. The apparatus includes an image acquisition system for acquiring images of the paper web and a computer analysis system for analyzing the acquired images and controlling the paper making process. The apparatus is useful at web speeds up to 5000 ft/min.

In summary, Shields, Callender, and Ischdonat clearly teach measuring the properties of a wet web via direct imaging of the web, and then controlling those properties of the web based on the imaging. Shields and Callender specifically teach taking the measurements on the forming wire. Shields and Ischdonat in particular teaches measuring formation. It would have been obvious to one skilled in the art that the method and devices of Callender can also be used to measure formation. It would also have been obvious that in Ischdonat measurements made on a wet web can be performed on the forming wire. Callender and Ischdonat specifically teach using reflected light. Therefore, the combined teachings of Shields, Callender, and Ischdonat suggest to one skilled in the art to measure formation of a wet web on a forming wire via imaging of the web with reflected light, and then controlling the formation of the web based on the imaging.

Bernie' and Yakabe are additionally cited here to exemplify that it is well known in the art to image a paper web to determine the sheet formation, and then use the determination of formation to control parameters in the paper making process that impact the formation. Bernie' teaches analyzing image data from sheet material such as paper to obtain scale of formation information and to process the scale of formation information so as to provide improved material quality information. The improved material quality information is used to adjust or control production parameters used in making the sheet material. Such control may be off-line or on-line. Yakabe discloses an apparatus for controlling the degree of fiber variations in paper sheet by imaging the sheet formation and optimizing jet/wire ratio and optimum foil angle on the basis of results of image processing. Such teachings would be useful in any one or more of the above of the techniques taught by Ischdonat, Callender, or Shields.

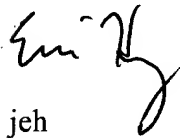
All other claimed features are deemed to be known to one skilled in the art as being conventional paper making steps, or obvious optimizations of the imaging process, including light impingement angles, shutter speeds, and darkened backgrounds (in this case, a dark forming fabric).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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